



93214.032

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF APPEALS AND INTERFERENCES

In re application of: : Examining Group: 3652
Ungetheim et al. : Examiner: C.A. Fox
Serial No.: 09/844,876 : Date: July 21, 2004
Filed: April 27, 2001 :
For: *Powered, Folding Ramp for Minivan*

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BRIEF ON APPEAL

Hon. Commissioner for Patents

Alexandria, Virginia 22313

SIR:

Enclosed are three copies of a Brief in support of an appeal from the rejection of claims 2 and 4-11 in the Office Action dated January 5, 2004, in the above-identified application.

This Brief is accompanied by the requisite fee set forth in Rule 17(c).

An oral hearing is waived.

Respectfully submitted,

Paul F. Wille

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Reg. No. 25,274

Attorney for Appellants



AF/3652
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ESW

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BRIEF ON APPEAL

I. Real Party in Interest

The real party in interest is Vantage Mobility International, LLC, Inc. as shown by an assignment dated April 27, 2001, and recorded at reel 011757, frame 0108.

II. Related Appeals and Interferences

None

III. Status of Claims

Claims 2 and 4-11 are pending in this application. Claims 2 and 4-11 stand rejected. No claim stands allowed.

IV. Status of Amendments

All amendments have been entered.

V. Summary of Invention

This invention relates to a fold out ramp for a minivan in which the mechanism for operating the ramp is substantially hidden under the floor of the minivan. The drive mechanism is coupled to the folding ramp by a rotating arm linkage, also located beneath the floor. In accordance with another aspect of the invention, the extension

of the folding ramp is partially controlled by dynamic braking, i.e. using the electric motor as a power generator and coupling the motor to an electrical load.

In accordance with MPEP §1206, the following table relates the appealed claims to the specification as originally filed. The table is not exhaustive of all possible cross-references.

11. A minivan adapted for wheelchair access by a folding ramp having one end attached to the minivan by a hinge and by a drive mechanism including a drive an electric motor having a rotor shaft coupled to said folding ramp for raising or lowering the ramp by rotating one end of the folding ramp about said hinge, characterized in that:

said drive mechanism is located beneath page 3, line 25; FIG. 1
the floor of the minivan;

said rotor shaft is substantially parallel with page 3, line 27, to page 4, line 13;
said hinge and includes a pair of arms attached FIGS 1, 2, 3;
coupled to said rotor shaft;

said ramp includes a pair of brackets; page 4, lines 5-7;

said drive mechanism includes a pair of page 4, lines 3-5;
shafts extending underneath said hinge and page 4, lines 12-13;
coupling the arms to the brackets, whereby
rotation of the rotor shaft causes rotation of the
ramp about said hinge.

2. The minivan as set forth in claim 11
wherein said drive mechanism includes:

a reduction gear having an input coupled to page 3, line 27;
the rotor shaft and having an output shaft; page 4, line 25;
a drive shaft coupled to said output shaft. FIGS. 2 and 3;

4. The minivan as set forth in claim 2 and page 4, lines 22–23;
further including a position sensing switch FIG. 2
coupled to said drive shaft for interrupting
power to said electric motor at a predetermined
position of said ramp when the ramp is being
extended.

5. The minivan as set forth in claim 4,
wherein said drive shaft can drive said motor
and further including

a heat dissipating load; page 5, line 7; FIG. 5

a braking switch for switching current from page 5, line 6;
said motor to said heat dissipating load, thereby
dynamically braking the folding ramp during
extension.

6. The minivan as set forth in claim 2 page 4, line 8;
wherein said drive shaft is supported by at least
two sets of bearings.

7. The minivan as set forth in claim 2,
wherein said drive shaft can drive said motor
and further including

a heat dissipating load; page 5, line 7; FIG. 5

a braking switch for switching current from page 5, line 6;
said motor to said heat dissipating load, thereby
dynamically braking the folding ramp.

8. The minivan as set forth in claim 7 page 5, lines 11–14;
wherein said load brakes the fall of the ramp
while the ramp is extended without applying
power to said motor.

9. The minivan as set forth in claim 8 page 5, line 7;
wherein said load includes a resistor for
dissipating current generated by said motor.

10. The minivan as set forth in claim 9 and page 5, lines 13–16; further including a diode in series with said resistor for blocking current through said resistor when said ramp is raised and the motor is driven in the opposite direction from when the ramp is lowered.

VI. Issues

Is claim 11 unpatentable over Petersen, Jr. et al. (“Petersen”) in view of Eisen under 35 U.S.C. 103?

Are claims 2, 4, and 6 unpatentable over Petersen in view of Eisen and Vartanian under 35 U.S.C. 103?

Are claims 5, 7, 8, 9, and 10 unpatentable over Petersen in view of Eisen, Vartanian, and Roth–Stielow et al. (“Roth”) under 35 U.S.C. 103?

VII. Grouping of Claims

The claims have been rejected in three groups.

In the third group, claim 5 relates to the combination of dynamic braking and position sensing. Claim 10 relates to a particular aspect of dynamic braking; viz. that the braking occurs only when the ramp is lowered.

It is requested that the claims be grouped as follows: [11], [2, 4, 6], [5], [7, 8, 9], and [10].

VIII. Argument

Claim 11 stands rejected as unpatentable over Petersen in view of Eisen. Claim 11 recites a minivan. The Petersen patent discloses “vehicle 2, such as a bus or the like” [column 4, line 40]. The Eisen patent discloses a portable scale for weighing patients. Under MPEP §2143.01 “There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art.” See *In re Rouffet*, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998). Patent specifications are addressed to one of ordinary skill in the art. Although patent examiners are not ones

of ordinary skill in the art, "Office personnel must always remember to use the perspective of one of ordinary skill in the art. Claims and disclosures are not to be evaluated in a vacuum" MPEP §2106.

Concerning the nature of the problem to be solved, even one **not** of ordinary skill in the art but perhaps one who has changed the oil and oil filter in his car, knows that working on an SUV (sport utility vehicle), for example, is vastly easier than working on a compact car. Why? Because there is more room to work in an SUV. Similarly, adding a platform to a bus simply does not present the problems associated with adding a folding platform to a minivan. It is respectfully submitted that a bus is not even analogous art to a minivan; see MPEP §2141, "ANALOGY IN THE MECHANICAL ARTS."

In appellants' invention, one has not only added a powered, folding ramp but one has done so with a minimum of intrusion into valuable interior space; see specification, page 2, lines 9–20. It is respectfully submitted that the Examiner is completely ignoring appellant's background of the invention.

Claim 11 recites a folding ramp. The Petersen patent discloses a flip-over ramp, wherein a one-piece ramp flips over one end to extend or retract. Clearly, the Petersen patent teaches away from the invention. Neither the Petersen patent nor the Eisen patent disclose a folding ramp.

The Examiner combines the teachings of the Eisen patent with those of the Petersen patent. When so stated, the rejection seems legitimate enough. On the other hand, if one combines a patent on a bus with a patent on a hospital scale to render obvious a fold-out ramp for a minivan, it is hard to imagine a more clear-cut example of hindsight reconstruction of an invention. Is the Examiner seriously suggesting that those in the bus art look to scales for suggestions, or vice-versa? It is respectfully submitted that *In re Rouffet* clearly prohibits such flights of fantasy; i.e., there is no motive to make the combination. After-the-fact rationalization is not the same as a motive.

Finally, "The mere existence in the prior art of individual features of a patented invention does not without more invalidate the patent under the obviousness test"; *Mitsubishi Electric Corp. v. Ampex Corp.*, 51 USPQ2d 1910, 1916 (Fed. Cir. 1999).

The Examiner rationalizes the combination with the following. "*It would have been obvious ... to provide the device taught by Petersen with an actuation*

assembly as taught by Eisen in order to allow the ramp to be folded mechanically while keeping the moving part covered, thereby preventing the device from injuring anyone near the device." (1) This in no way explains why one would go the art of portable patient scales to find the "actuation assembly." (2) This rationalization is from the viewpoint of the user, not the provider of ramps for minivans. That is, the Examiner is making "one of ordinary skill in the relevant art" the user when it should be the provider. (3) Buses and hospital scales do not present the same problems as a minivan. (4) The rationalization is inapposite. A provider would cover the "moving part" wherever it was located; see FIG. 1 of the Tidrick patent of record and discussed in the Background of the Invention. Thus, "cover" is no motivation for the combination.

Claims 2, 4, and 6 stand rejected as unpatentable over Petersen in view of Eisen and Vartanian. There is no basis for the selection of components but appellants' claims. There is certainly no suggestion for the combination in the prior art itself; *In re Rouffet*. Further, the disclosure of the Vartanian patent overcomes none of the deficiencies noted in the disclosures of the Petersen patent or the Eisen patent.

The Vartanian patent is added for its disclosure of "garmotor 138." The Vartanian patent actually discloses a **linear drive**, not a rotational one. Specifically, the Vartanian patent discloses a "*linear actuator having a threaded screw and nut arrangement operated by an electric garmotor 138*" [column 8, lines 22–26]. (1) No basis is given for picking the word "garmotor" out of the Vartanian patent (the only occurrence of the word). (2) The teaching of the Vartanian patent, of a linear drive, must be ignored in order to make the combination. Obviously, there is no basis in the prior art for the combination or the selection of components. (3) The mere existence of a component does not render use of that component obvious.

The Examiner asserts that "*It would have been obvious ... to provide the device taught by Petersen with a gear motor as taught by Vartanian in order to increase the torque of the drive motor without increasing the size of the motor, thereby allowing a smaller motor to lift a heavier load.*" (1) A screw and nut drive provides a tremendous torque increase. Why not pick the screw and nut? (2) The Vartanian patent does not teach a *reduction* gear. The Examiner *assumes* such. Given the screw and nut drive, there is no basis for the assumption and, therefore, no basis for

the rationalization based on torque. (3) Smaller than what? Heavier than what? A hospital scale?

Claims 5, 7, 8, 9, and 10 stand rejected as unpatentable over Petersen in view of Eisen, Vartanian, and Roth. The Roth patent is cited to show dynamic braking. Appellants have already gone on record as saying that the principle of dynamic braking is known. The broad combination of dynamic braking and a folding ramp is novel and unobvious. The combination enables a compactness and safety not previously obtainable as easily. It is respectfully submitted that there is no basis in the prior art for the combination proposed by the Examiner; *In re Rouffet*, 47 USPQ2d 1453, at 1457 (Fed. Cir. 1998).

It is noted that the Examiner refers to "well know [sic] technology (regenerative braking)." Technically, this mischaracterizes the Roth patent. There is no regeneration disclosed in the Roth patent. Energy is dissipated as heat. No energy is recovered and returned to a source. "[B]raking energy is converted to heat in the braking resistor and released to the surroundings" [column 1, lines 16–17].

With respect to claim 5, the combination is particularly novel and unobvious because one has the combination of dynamic braking and the gearbox being operated "backwards" to enhance the braking effect. See specification, page 4, lines 25–28. This advantage is not remotely disclosed or suggested by any of the prior art cited by the Examiner. It certainly is not suggested by the combination of patents relied on by the Examiner.

With respect to claim 10, the combination is particularly novel and unobvious because one has the combination of dynamic braking and the diode, which enables dynamic braking only when the ramp is being lowered. The system is passive, requiring no power. Thus, the further advantage of having one way dynamic braking even if the battery fails in the vehicle; see page 5, lines 11–17, of the specification. This advantage is not remotely disclosed or suggested by any of the prior art cited by the Examiner. It certainly is not suggested by the combination of patents relied on by the Examiner.

Diode D in the Roth patent serves a completely different purpose and is in parallel with the resistor, not in series as claimed. Diode D, with the other elements in block 2, acts as a chopper; column 3, line 1.

The Examiner asserts that diode D is in series with the resistor. This is obviously in error, as can be seen by inspecting FIG. 1 (there is a little dot, representing a connection, on each end of the diode) and by reading the disclosure of the Roth patent. Column 2, line 66–67, of the Roth patent discloses "*Connected in parallel to the diode D is a braking resistor 3.*" It is respectfully submitted that an Examiner must accept the prior art as written.

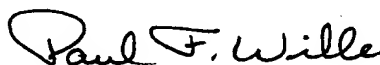
IX. Summary

It is respectfully submitted that the rejection of claims 2 and 4–11 is a classic hindsight reconstruction of disparate disclosures. Appellants' invention is quite unlike anything in the prior art. The rejections include errors of fact, unfounded assumptions, and rationalizations having no basis in the prior art. The analysis required by *John Deere* and *In re Rouffet* is not remotely provided.

X. Conclusion

In view of the foregoing, it is respectfully submitted that the rejections of claims 2 and 4–11 are in error and should be reversed.

Respectfully submitted,



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11. A minivan adapted for wheelchair access by a folding ramp having one end attached to the minivan by a hinge and by a drive mechanism including a drive an electric motor having a rotor shaft coupled to said folding ramp for raising or lowering the ramp by rotating one end of the folding ramp about said hinge, characterized in that:

said drive mechanism is located beneath the floor of the minivan;

said rotor shaft is substantially parallel with said hinge and includes a pair of arms attached coupled to said rotor shaft;

said ramp includes a pair of brackets;

said drive mechanism includes a pair of shafts extending underneath said hinge and coupling the arms to the brackets, whereby rotation of the rotor shaft causes rotation of the ramp about said hinge.

2. The minivan as set forth in claim 11 wherein said drive mechanism includes:
a reduction gear having an input coupled to the rotor shaft and having an output shaft;

a drive shaft coupled to said output shaft.

4. The minivan as set forth in claim 2 and further including a position sensing switch coupled to said drive shaft for interrupting power to said electric motor at a predetermined position of said ramp when the ramp is being extended.

5. The minivan as set forth in claim 4, wherein said drive shaft can drive said motor and further including

a heat dissipating load;

a braking switch for switching current from said motor to said heat dissipating load, thereby dynamically braking the folding ramp during extension.

6. The minivan as set forth in claim 2 wherein said drive shaft is supported by at least two sets of bearings.

7. The minivan as set forth in claim 2, wherein said drive shaft can drive said motor and further including

a heat dissipating load;

a braking switch for switching current from said motor to said heat dissipating load, thereby dynamically braking the folding ramp.

8. The minivan as set forth in claim 7 wherein said load brakes the fall of the ramp while the ramp is extended without applying power to said motor.

9. The minivan as set forth in claim 8 wherein said load includes a resistor for dissipating current generated by said motor.

10. The minivan as set forth in claim 9 and further including a diode in series with said resistor for blocking current through said resistor when said ramp is raised and the motor is driven in the opposite direction from when the ramp is lowered.